

AIRFIX

magazine

For plastic modellers

ONE SHILLING MONTHLY

AUGUST 1963



IN THIS ISSUE

Building a model travelling crane ★ Paris Air Show—full report ★ Easy conversions on the Churchill tank ★ Rules and regs for slot racing ★ Profile: High-flying Wellingtons

1!

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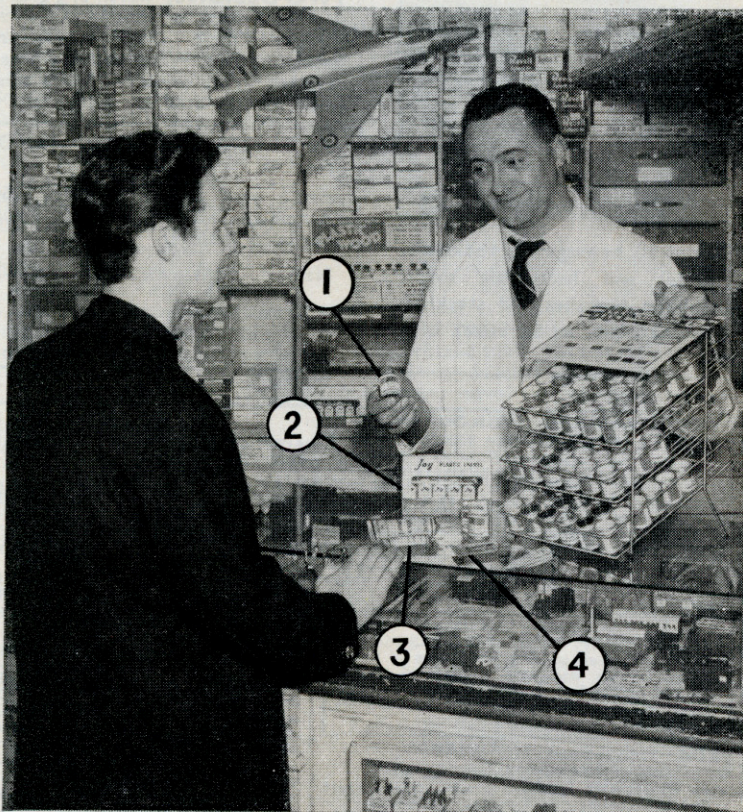
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AIRFIX

MAGAZINE

For plastic modellers everywhere

VOLUME 4 NUMBER 3 AUGUST 1963 ONE SHILLING MONTHLY

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Alan Brinton

EDITOR

John Blunsden

ASSOCIATE EDITOR

Darryl Reach

ART EDITOR

Michael Rogers

ADVERTISEMENT DIRECTOR

Patrick Stephens

EDITORIAL OFFICES

Brands Hatch Circuit,
Fawkham, Dartford, Kent
Telephone: West Ash 411

ADVERTISEMENT DEPARTMENT

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Bigger and better

OUR editorial mail bag is never short of letters from readers offering hints and suggestions on how we can improve the contents of AIRFIX MAGAZINE. On the other hand, we receive a similar volume of correspondence expressing satisfaction at the present contents. In an effort to please both groups, we are adopting a bigger format from our September issue (on sale August 28) which will enable us to display our contents in a brighter, easier-to-read manner.

Besides brighter layout, we also have plans for better contents, with more of a practical modelling flavour. One new series, in fact, begins in this issue. Military modelling, by C. O. Ellis, is intended to cover another modelling aspect previously not dealt with at great length in our columns.

We have hesitated, in making our future editorial plans, to alter too radically the present successful contents of the magazine. Instead, we prefer to preserve this flavour and add, rather than substitute, new articles. One of our regular features, Picture page, is, however, being discontinued. Although of interest, we felt it held insufficient practical value. But we shall still be pleased to consider readers' pictures for publication, as space permits, elsewhere in the magazine.

With our bigger and better issues, we have been forced to raise the selling price to 1s 6d per copy. This has been brought about principally by the increase in size, and also by the fact that printing and editorial costs have repeatedly risen since our first issue appeared over three years ago. However, we are sure that readers will find that the new magazine is even better value at the increased price. We also hope that, through reading it, they will continue to derive more pleasure from their absorbing hobby.

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Cover picture

A West German Air Force Fiat G-91T, two-seat trainer version of NATO's strike fighter, flies below the summit of the mighty Matterhorn. The Airfix kit of the standard G-91 provides the basis for a simple conversion to this later variant of a versatile aircraft.

NEWS FROM AIRFIX

The world's greatest value in construction kits

Prairie tank, human skeleton and US Marines set

RAILWAY modellers have been eagerly awaiting the release by Airfix of another OO/HO scale locomotive. Latest to appear is the Prairie 2-6-2 tank which, formerly in the Kitmaster range, has now appeared under the Airfix label, selling for 4s 6d. The kit is colourfully boxed, complete with cement and transfers, and the well-illustrated instructions give full painting details. Many of the 65 parts are numbered, for easy identification.

Careful assembly results in a replica on which the wheels rotate, together with the driving gear, in first-class true-to-prototype manner. The former couplings have been replaced on this model by the standard Airfix 'Buckeye' automatic type, which are moulded on to the front and rear pony trucks. Airfix couplings are, of course, based on the X2F type, as standardised by the National Model Railroad Association. Dummy non-working three-link couplings are also supplied, and can be fitted into slots in the front and rear buffer beams, if they are preferred to the working automatic couplings.

No provision is made for motorising the Prairie, but various successful methods have been devised in the past for Kitmaster models, and can be

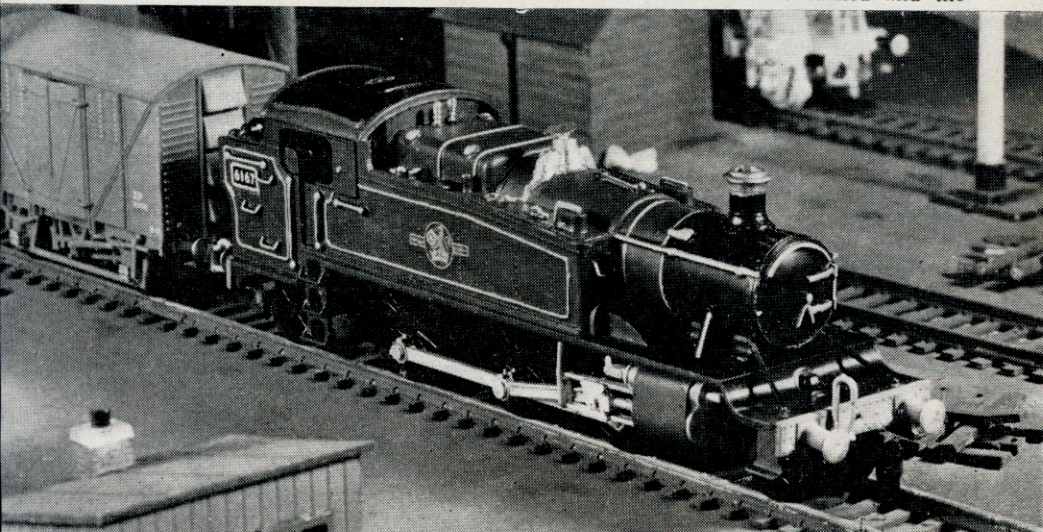
equally applied to this Airfix model. The Romford driving wheel conversion kit No 7, reviewed in the August 1962 issue of AIRFIX MAGAZINE, could form the basis of a successful motorising attempt.

Prairie 2-6-2 tank locomotives were introduced by the Great Western Railway in 1931 for suburban passenger and mixed traffic duties in the London area. They weigh 78 tons and have a tractive effort of 27,340 pounds. The 6100 class locos have proved both successful and reliable and are allocated to depots between London and Oxford.

Bare bones

Do you know where to find the humerus, the femur, the patella or the phalanges? If you don't, the quickest way to learn is by assembling one of the new Airfix plastic construction kits of the human skeleton. Priced at 4s 6d, it comprises 46 scale parts, in white plastic, which assemble into a 12 inch tall replica of the human frame.

The clear and easy-to-follow instruction sheet names all the major bones, while a separate section describes their function. When assembled, the model's arm and leg joints work realistically, while the head can be turned and the





jaw raised and lowered. Thus, true-to-life movements can be easily simulated.

The completed model can be displayed by hanging it from a transparent wall plaque provided with the kit. Students and first-aid pupils will find the model of value in their work, while it will also appeal to modellers keen to make something (or someone!) a little out of the ordinary. The kit is packed in an attractive box, and is supplied complete with a tube of cement.

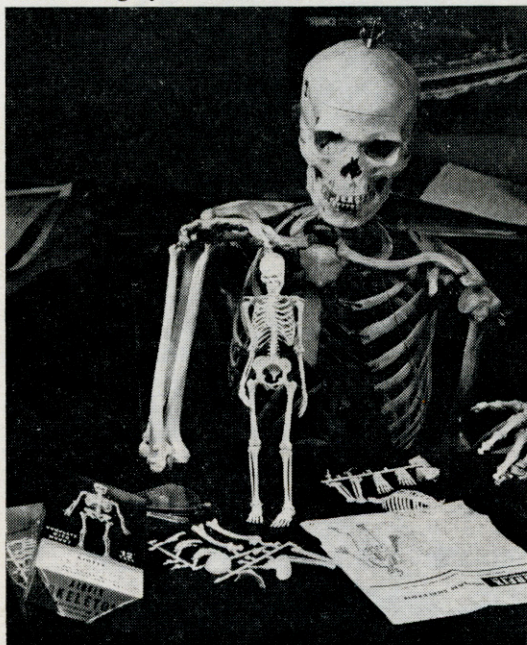
Miniature Marines

Latest addition to the growing Airfix range of HO and OO scale military figures is a company of 46 US Marines, selling for 2s. The set includes officers and grenade throwers, an assault boat, Marines using rifles, bazookas, flame throwers and carbines, and figures injured in battle. The figures are all extremely well detailed, and are formed in unbreakable hard-wearing plastic.

Among the toughest fighters in the world, the US Marines, formed in 1775, have served in every major action (300 in all) since their first battle against

Above: *New OO/HO scale US Marines* (The box does not include the three-penny bit, used here as a guide to size!) Left: *This OO/HO scale Prairie tank loco* sells for 4s 6d. Right: *The skeleton kit*, compared with the full-size version.

Nassau, in the Bahamas, in 1776. Their emblem—a Western Hemisphere, superimposed on a folded anchor and surmounted by a spread eagle—caps the motto *Semper Fidelis* (always faithful). In world war two, they did valiant service at Guadalcanal, Bougainville, Eniwetok, Guam, Iwo Jima and Okinawa, and more recently were involved in the lengthy Korean campaign.

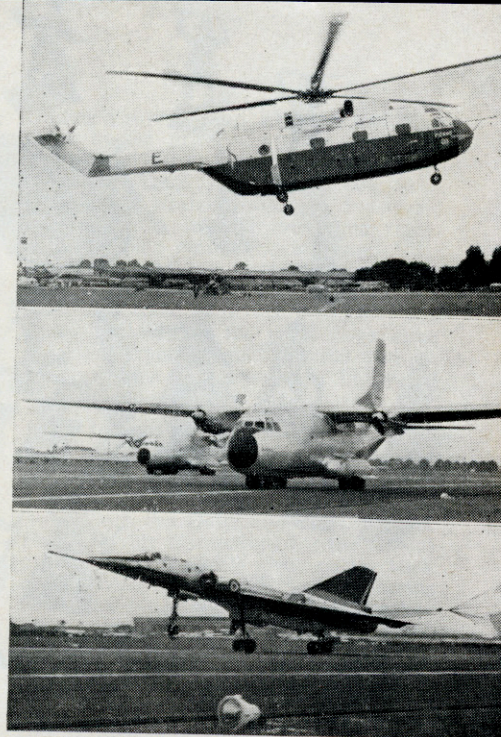


IN THE AIR

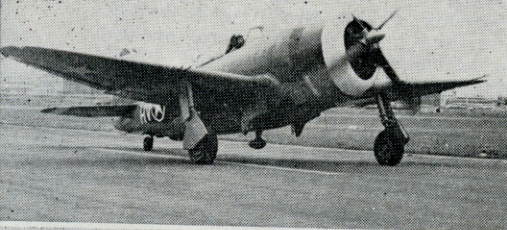
BY ALAN W. HALL

SO great was its importance and so magnificent the display at the Paris Air Show this year that I see no reason why anyone could possibly afford to miss this biennial event. From the smallest light aircraft to the largest jet airliner, the exhibition and flying display, staged by the world's leading aircraft manufacturers, is the most magnificent and breath-taking event in this year's aviation calendar and one which grows in importance every time it is held. For the spotters, it is the occasion in which their delight at seeing so many new and interesting aircraft compares only with the discovery of gold in the Yukon!

Previously I have only been able to spend one day at the Salon, but this time I was able to enjoy a full three-day stay, and yet I went away feeling that there was still much to be seen and more to be done. With at least 400 aircraft at Le Bourget airport, and many of these in the flying display, it was no wonder that



Top to bottom: One of the largest helicopters in the show—the Super Frelon in prototype markings. The Transall C160 has been ordered in quantity by the French and German governments. A Dassault Mirage IV, capable of carrying the French atomic weapon, streams its braking parachute on landing.



the programme began at nine in the morning and was not concluded until well after five at night. The advertised lunch break of two hours didn't seem to trouble the exhibitors, as flying just went on and on until one's mind reeled at the thought of seeing any more.

The flying programme itself was broken up into several fairly well defined parts. In the morning the slower aircraft, including the executive and sporting types and some of the transports, showed their paces, while the afternoon was given



Left, from top to bottom: Highlight of the show for many was the magnificent display put up by the veteran P-47 Thunderbolt. Now equipped with operational anti-submarine instruments, the Breguet Atlantic is seen here being prepared for its part in the flying display. Having been derived from an American prototype, the German-built Weser|Sikorsky Skycrane carried a full-size lorry beneath it during the display.



over, firstly, to the many helicopters on display and the faster and more noisier of the participants. The seven air force aerobatic teams also gave their demonstrations later in the day on Sunday.

Each country put up their best. The Beagles from Britain, the Cessnas, Pipers and Beechcraft from the USA, the Portofino and Riviera from Italy and the French Horizons, Jodels and Rallyes. Germany showed the latest line in Bolkows and Dorniers, Switzerland the Turbo-Porter and Austria the Flamingo. Each lined up on the end of the runway to give its show for about five minutes before the next aircraft took over. For those of us getting a bit 'long in the tooth' the highlight was, without doubt, the display of aerobatics by Glenn Bach, Republic's test pilot, in their P-47 Thunderbolt. The old aircraft has been refurbished in magnificent style, and according to Glenn, with whom I had a few words after his polished display, had done over 200 hours flying in Europe alone since it came over here at the beginning of June.

From the lunch break onwards the helicopters held the field. From the diminutive Hughes 269 and Dornier 32 to the extremely large and complex Super Frelons, they cavorted around the Le Bourget circuit like so many bees after honey. One Bell UH-1 Iroquois even came so close that I thought it intended to pick me up on the way round but, like so many of its kind, went into a vertical climb just a few feet away. The

French Alouette team of the Armee de L'Air, streaming red and blue smoke, put on a delightful ten-minute 'ballet' before the President's tent which, although attractive to the crowd stationed at a safe distance, covered the photographers and their equipment in at least two colours of the rainbow.

The smoke having cleared, the largest helicopter there, the Weser/Sikorsky Skycrane, showed just how a large lorry suspended beneath it could beat both the speed limit and the traffic jams which was, I suppose, the only *earthly* object of the hop, skip and jump show by the members of the Bell Rocket Belt team who hovered about at 50 feet saying 'Look, Mum, no hands'.

Then came the turn of the larger transport aircraft. The DH125 and Mystere 20 preceded this show by giving the latest ideas of what the best-dressed executive may be flying next year, and the Trident and VC-10 added much to British prestige by convincing exhibitions of their capabilities. From the French side, the highly polished Super Caravelle, the Potez 840 and the Transall C160 provided the contrast, and a Hercules showed the flag for the USA.

Having completed half of the afternoon's display, the time was now ripe for the pride of the French Air Force, the Mirage, to show how versatile and useful an aircraft could be. Three of the bomber Mark IVs, a IIIE carrying stores, a IIIR reconnaissance version in its unusual camouflage, a two-seat IIIB and a standard IIIC took-off with a roar which

This aerial picture captures the atmosphere of the static exhibits.

Continued on next page



IN THE AIR—Continued

sent hands to ears, in an effort to lessen the terrific noise. Each one put up a magnificent display that must have done much to raise the Dassault company's prestige with the many military missions.

There followed an individual performance by a SAAB Draken, which heralded a particularly accurate display by a Swedish Air Force team using the same mount on the Sunday. The Lightning T5 seemed slow by comparison, but I learnt later that this was due to reheat troubles and not to the shower of sparks which went up when his rear fuselage scraped the runway on take-off.

From very fast to very slow, came an almost vertical descent as the Breguet 941 dropped out of the sky, like an ungainly elephant, to disgorge three fully-loaded jeeps in record time. This fantastic aircraft literally hovered its way round the airfield to prove, without a shadow of doubt, its designers' claims for manoeuvrability.

Whilst watching this display, the Belgian-constructed F-104 had leaped off the runway and came screaming back to cut the Le Bourget grass at zero feet, close to the speed of sound and *upside down*. It then followed with an amazing series of aerobatics which had the crowd enthralled, only to be equalled a few minutes later by the noise and speed of the US Navy Vigilante and Phantom II from the Sixth Fleet in the Med.

The Phantom and Vigilante were followed by other near-naval participants,

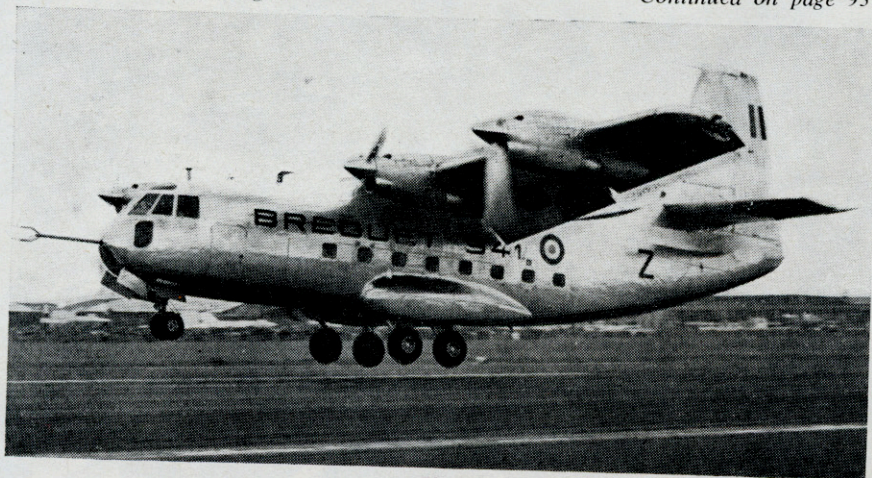
The Breguet 941 hovers over the runway before touching down to land in almost its own length.



A rare aircraft, a Boeing C-108 transport version (top) of the B-17 Fortress, with a longer nose and cabin windows. It is believed that this aircraft was converted from the standard by the Swedes after it had force-landed in their country during the war. It now belongs to the French Geophysical Society and is stationed at Criel/Senlis, some 30 miles north of Paris. Another rare find at Toussus-Le-Noble, south-east of Paris, was this Catalina, one of the few still left flying.

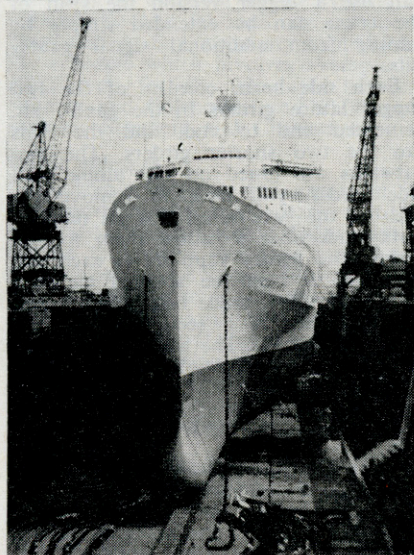
namely the Atlantic and Orion patrol aircraft, both turbo-prop powered and by all counts similar in performance. More naval effort, this time from Britain in the form of some well-timed and executed low-level passes by a Buccaneer, finished the show, apart from the massed flypast

Continued on page 93

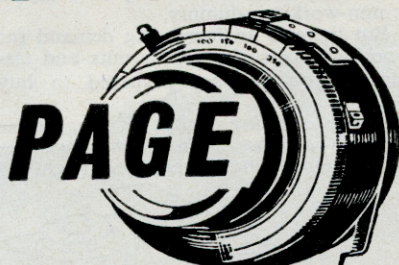




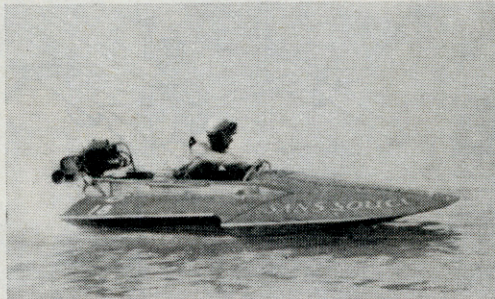
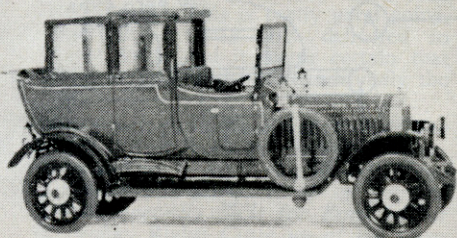
Above: This attractive picture of diesel and steam at Blaenau Ffestiniog (Nth) was taken by T. J. Ballance, of Marino, Dublin, and wins him our picture of the month award. Left: D. A. Brewer, of London, SE10, submitted this shot of the liner *Canberra* in King George V dry dock at Southampton.



PICTURE



Below, left: This Airfix 1911 Rolls-Royce was built and photographed by H. J. Tilly, of Bournemouth. Below: J. Dawe, of Leamington Spa, snapped this racing hydroplane at South Cerney, Glos.



Overhead travelling cranes

THE motorised dockyard crane which I described some time ago in *AIRFIX* MAGAZINE created a good deal of interest. Finding a suitable site for it on the average layout might be difficult, unless you have room for a dock basin. An overhead travelling crane, however, is perhaps more versatile and many goods yards have them. They can also be used inside or outside a locomotive works, or a large engineering factory, although few modellers are likely to want to make such a detailed working model and keep it out of sight!

Overhead cranes come in a wide variety of shapes and sizes, so there is really very little difficulty in making one by adapting Airfix parts. Probably the most useful kits for this sort of model are those for the travelling crane and the signal gantry, although if a plate girder gantry were being modelled, the turntable kit would provide some useful parts. It is also not necessary, of course, to make your crane a remote-controlled working model. It can be hand operated from simple crank handles, or even be a non-working dummy.

But there is an increasing demand for working accessories for layouts and (assuming you are not prepared to buy

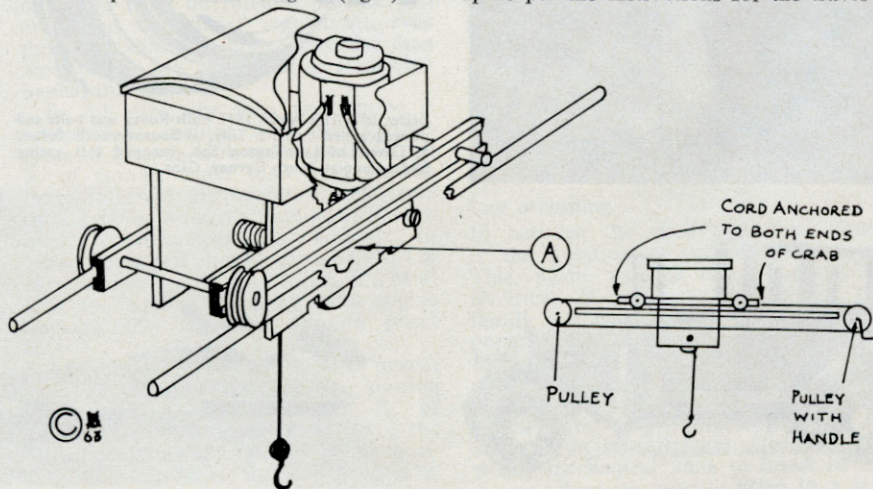
them ready-made and pay pounds for each one) you will find this model surprisingly easy to make. Basic components used in the model illustrated are two kits *each* of the travelling crane and the signal gantry, two Ripmax Orbit 105 motors, various Ripmax gears, pulleys and brass shafting and a six inch length of eight or six BA screwed rod. If you motorise the travelling motion, a further motor and gearing will be necessary.

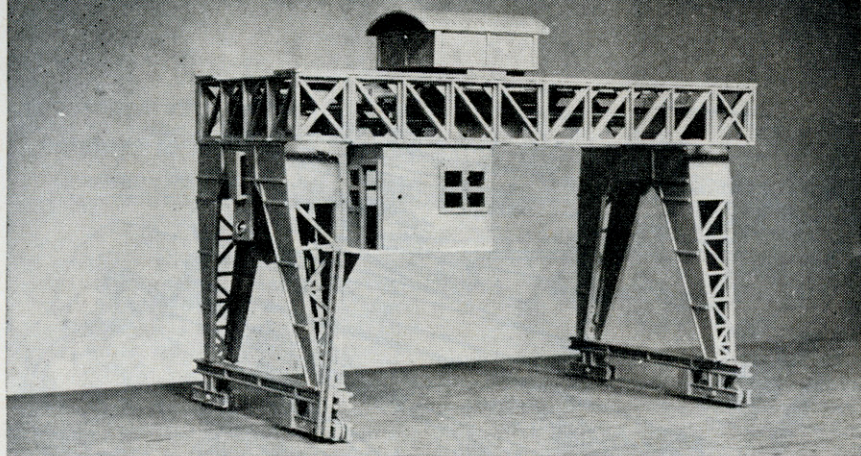
The gantry

A word in general first about sizes. The model in the photographs has the widest span you can get from the kits mentioned, but if your goods yard or factory can use a bigger version the span of the crane can be extended simply by adding from additional signal gantry kits.

Each side beam consists of the two longer lattice girders in the gantry kit, cemented end to end, and the ends are the two shorter girders. The two catwalks are glued on top along each side girder—you have to remove the ends of the two raised ribs on the catwalk undersides to allow them to bed down. The gantry supports at each end are made up from the 'splayed' leg sides of the travelling crane base (parts 1 and 3), separated by a section of the jib (parts 36 and 37). The wheel units, made up as per the instructions for the travel-

Cutaway drawing (left) of the crab—showing details of hoist mechanism—and simple hand traverse gear (right).





ling crane, are cemented to the bottom of the supports. Ream out the axle holes so that the wheels rotate *very* freely. The inner gantry support side at one end has to have a section cut away to leave room for an Orbit 105 motor to drive the traversing gear.

The 'rails' for the 'crab' are lengths of brass gear shafting journalled in holes in the plain oblong bases of the signal gantries (parts 9), glued inside the ends of the crane gantry with the rails $1\frac{1}{2}$ inches apart. Adjust the bases so that the *tops* of the rails come $\frac{1}{4}$ inch below the top of the gantry platform. Before inserting the rails, solder an insulated wire lead to each rail—they carry the current to the crab motor for hoisting the hook.

The crab

This is a simple box made up of the top section of parts 2 of the travelling crane, each cut in two, topped by a section of the roof, part 31. Two cabin backs, parts 23, are glued inside to form the bearings for the drum shaft. An Orbit 105 motor, minus its metal fixing plate, is screwed direct to one end of the crab, using the self-tapping screw just removed. The crab travelling wheel bearings, part of the girder from two spare wheel units (parts 47, 52, 53 or 58) are cemented to the crab sides. The wheels are pairs of travelling crane wheels glued face to face, all axle stubs being cut off and new axle holes being drilled in them. The new axles pass right across the crab and the wheels are force-fitted on the axle ends.

The traversing motion

For a non-working crane this would, of course, be omitted. For a hand-worked version, a simplified mechanism is sketched in the drawings. For an electric version, the best method is to use a

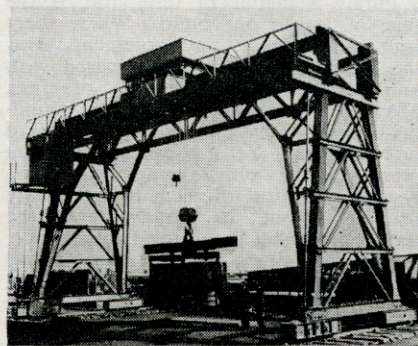
transverse screwed rod, with a captive nut in the crab drawing the crab along when the rod is rotated. This gives a nice steady motion, but you can drive the hand-worked version (sketched) by a motor through a worm drive if you wish. The speed will be a bit brisk.

Control cabin

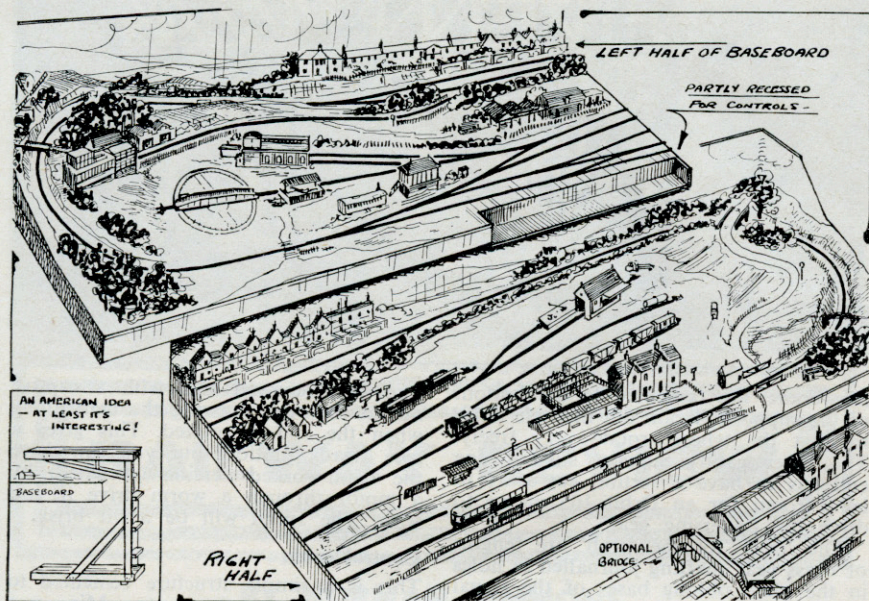
This is a simple structure cemented to the underside of the gantry. Mine was made out of cut down parts of the crane cabin, with a flat Plastikard roof and floor. Remember that the main windows in such a cabin face inwards towards the crane hook to give the crane driver a full view of his job. By careful siting, this cabin could be made to house the motor for the traversing motion, if you object to it in the position I have used.

Next month we shall show in detail how the various mechanisms work.

Copyright, Mike Bryant, 1963



Top: The completed model bears a striking likeness to this prototype (above) made by Herbert Morris Ltd, of Loughborough, who supplied the picture.



LAYOUT REALISM

by Alex Bowie

THOUGH last month's layout was designed for those who like to speed up operations, personally I like my operational work to be leisurely, though I am more interested in construction than in operation. It's a matter of taste, or rather of putting one's own interpretation on something which is almost impossible to reproduce accurately.

Purely a matter of taste, too, is the type of layout one builds. Where there isn't much space, any arguments over the merits of one type compared with another are largely a waste of time. Most perfectionists dislike the round-the-houses layout on a single baseboard or breadboard. Yet it is easily one of the most popular with average modellers, because for most of them it is the only feasible layout. Its disadvantages are not so great that they can't be overcome, though, and it's a pretty unimaginative modeller who can't master most of them.

Accessibility

Quite a large number of people require a layout to be used on the whole of one side of a room or garage. At first sight a point-to-point would seem the obvious solution, but if a chap doesn't

like this type of layout, it's no use trying to persuade him in its favour. And there is this about it, a point-to-point confined to one side of a room doesn't give much length of run, whereas the oval gives almost double.

Now there are limits to the feasible width of a big breadboard, if it is set against the wall. Anything much over three feet can be a nuisance, for if the train derails, or maintenance has to be done, you need a very long arm.

To overcome the difficulties of a deep baseboard there once was a fashion for having manholes in the middle, sometimes covered over with detachable buildings. The operator dived under the layout and poked his head, and his soldering iron, through them. Apart from their tendency to induce claustrophobia, manholes are not wholly satisfactory, unless very large.

But if the baseboard is kept down to about 40 inches in width, things aren't too bad, though major repairs might have to be done with the whole baseboard moved away from the wall. I say might, because many years ago one of the American magazines showed a device designed to help in layout maintenance.

Left: The layout split into two halves, enabling them to be drawn a little larger. Note that there are fairly comprehensive facilities, for the use of one station only allows more numerous, and longer, sidings and other trackwork.

This is sketched here, at least what I can remember of it. The idea was that you laid on top, face downwards, while prodding around.

Long and narrow

Now as to the layout sketched this month, observe that the curves will be a strictly proprietary radius of about 15 inches, which will go comfortably on a baseboard which is about 40 inches wide. Furthermore, a 15-inch curve each end of the board will only take up two feet six inches of baseboard length, and this leaves a more comfortable amount of board from which to build a decent passenger station and goods yard. The whole layout shown is just over 15 feet long. It could be longer, of course or, with some pruning, shorter.

But the essential thing is that we have a nice long 'straight', plenty of scenic work, plus the desirable oval. For, make no mistake about it, an oval is very, very, desirable for those that want it, and I get just a little tired of one-track-minded enthusiasts who put forward the view that it cannot be realistic. Unless you have an impossibly large room, no layout is basically realistic, but almost every type can be faked up to deceive the eye, provided that the modeller uses his imagination intelligently.

Thus, the long but narrow model sketched this month follows the same principles as that which won first prize at last year's hobby show, and it pleased me to see that the short radius curves, which I've been pushing for so long, were used so successfully. Have a close look at the sketch. You will see that all facilities are practically concentrated on to one station.

Obviously, unless the room is exceptionally long, there can't be a lot of space for two stations. But as a matter

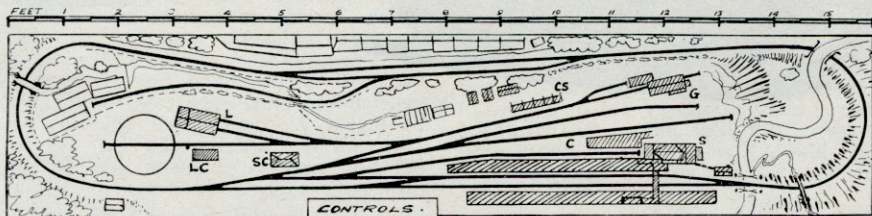
of fact, the idea of having a single station only is becoming more popular, on the basis that one good station is better than a couple of glorified halts. In this particular case, you will note that a fairly comprehensive goods yard is possible, with extra sidings which amount to almost a luxury in small layouts. I don't advocate crowding these sidings with rolling stock, for nothing looks worse than a layout which looks like a display shelf at the local model shop. But they give you the chance to achieve some of the authentic spaciousness of the real thing. There is, too, a factory siding coming discreetly from the back, and while we're at it, a few explanations about the back of the layout won't be amiss.

Disguise—but don't hide

The track here is operational, but not wholly realistic because, after all, it is very near the front of the layout. So its too-close effect is disguised with low hedges and a few trees. These should not obstruct the track, for accessibility must be considered. They could be no taller than carriage roof height, with a few trees widely spaced. Thus it will still be possible to watch the progress of a train.

The buildings should be half or even quarter relief, with the backs of them showing, because small backyards will take less space than roads. To the right of the layout you will see a road leading up the embankment to the over-bridge, and to avoid it being unrealistically steep, it should wind in prototype fashion. There is also a footbridge to break up the track curve still more.

As can be seen from this layout plan, the station yard can be nearly 12 feet long, on a baseboard just over 15 feet. The facilities are: L—loco shed; LC—loco coal; SC—signal cabin; C—cattle dock; CS—coal staithes; G—goods shed; S—station building. Sectional proprietary track could be used instead of flexible, and this would mean slightly longer sidings, but more width between tracks.



Military modelling

by C. O. ELLIS

Churchill AVRE

EASY-TO-BUILD

AIRFIX CONVERSION

CHURCHILL tanks were adapted for many specialised purposes during World War II, and it is possible to reproduce many of these vehicles as conversions of the basic Airfix kit. One of the most ubiquitous Churchill variants to serve with the Allied armies in North West Europe in 1944-45 was the 'Armoured Vehicle, Royal Engineers' (known, more shortly, as the AVRE) which was operated by Armoured Engineer Brigade assault regiments.

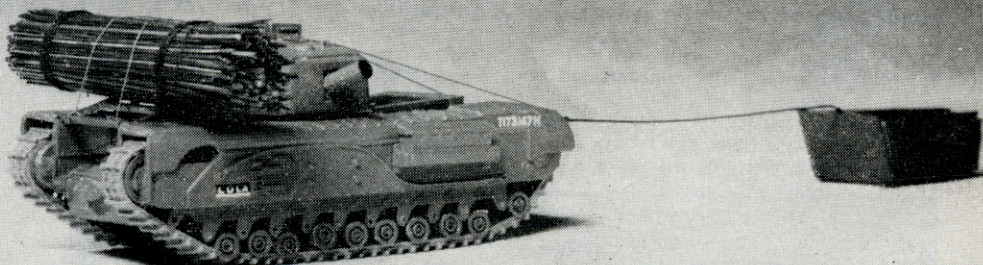
The main difference between the AVRE and the standard Churchill tank was in the provision of a main armament of a 12-inch Petard mortar in place of the 75 mm gun. This mortar fired a powerful 40 lb spigot

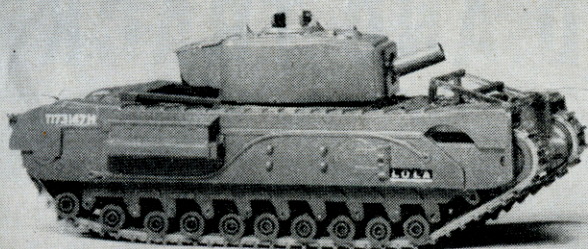
bomb (nicknamed 'the flying dustbin') for a distance of some 59 to 80 yards. The special preserve of the AVRE was the reduction of pill-boxes, anti-tank obstacles, machine-gun nests, bastions and the like, and as a heavy tractor for towing bridge sections on skids. Often AVREs worked in conjunction with other specialised Royal Engineers tanks, such as bridge-layers and mine-clearers, to perform duties which, although less glamorous than those of the 'fighting tanks', were sometimes more onerous and certainly just as important.

Conversion of the Airfix Churchill tank to an AVRE is an exceedingly simple task. Before commencing assembly, the dust guards over the *front* horns can be removed. This is easily done by cutting round the moulding lines, but care must be taken not to cut into the axle holes for the front sprocket wheels. In fact, this is an optional modification, some Churchills running with, and some without, the dust guards.

Now make up the tank according to the instructions, except that the 75 mm gun barrel should be cut off, leaving a stump of 2 mm on the breech block. The Petard mortar can be made by cutting a piece of plastic sprue (from the kit) 8 mm long and cementing it to the stump which remains of the original gun barrel. A more realistic 'hollow' effect might be achieved by binding gum strip around a 6 mm length of plastic sprue and trimming the resulting barrel down to an overall length of 8 mm. And there you have your basic AVRE. One such

The completed Churchill AVRE model, carrying a fascine and towing a demolition sledge. Notice that the turret is trained on the beam, in order to clear the fascine.





This view of the AVRE, with the fascine removed, shows the modifications to the front dust-guards, the arrangement of the skids, and the Petard mortar. The two V-shaped strops attached front and rear are joined above the turret with a wire hook to hold the fascine in position. On the right is a demolition sledge made from scrap balsa.

vehicle bore the name CHEETAH and the number T172053/c.

One of the most common duties for the AVRE was the carrying of fascines. These are very large bundles of hazel or chestnut wood which can be dropped into anti-tank ditches or trenches, allowing tanks to cross. The fascines are lashed to the front deck of the vehicle, forward of the turret, which is trained abeam for this operation. The AVRE approaches the ditch, the crew releases the lashings and the fascines tumble off the front of the vehicle into the ditch.

There appears to have been no hard and fast rule about the size of the fascines, except that they should be wider than the tank. Some AVREs carried two or three slender ones, others carried just one fascine of huge diameter. In model form, fascines are best made from bundles of bristles bound with black thread and of varying diameters from $\frac{1}{4}$ -1 inch. An old stiff broom will keep you supplied with enough fascines for a whole miniature armoured division! Incidentally the carrying of fascines wasn't confined to AVREs. It would be quite in order for a normal tank to act as a fascine carrier, if operations made this necessary. The only point to remember is the need to train the turret abeam while the fascine is on the front deck.

A sophisticated arrangement was fitted to many AVREs which allowed the fascine to be released while under fire, without exposing any member of the crew. Portable skids, sloping forward, were fitted to the front deck between the horns and a large fascine was held in place by a four-legged wire strop, which was attached to the four corners of the upper deck. The 'cross' of the diagonal four-legged strop was, in fact, a metal release device which was situated

just above the turret. A wire from this release device was led through the cupola, allowing the fascine to be released from inside the turret. A model AVRE can be so fitted, using strips of scrap plastic on the front deck to represent the portable skids and thread for the four-legged strop. In model form this strop is best made as two V-shaped sections. The legs of the front V are attached to the front of the skid and the legs of the rear V are attached to the towing lugs at the rear. A small wire hook can then serve to join the two sections after the fascine has been placed on the skids. The length of the strops will, of course, depend on the diameter of your fascine. Although it is impossible to reproduce the release device exactly in such a small scale, this arrangement, with a wire hook, does allow your model to drop its fascine. Two un-named AVRE fascine carriers bore the numbers T32371/B and T172622A.

Yet another appendage for the AVRE was the special wooden sledge, used mainly for carrying demolition materials. These sledges were stoutly made, rather like pontoons in appearance. I have no details of the dimensions, nor am I sure that there was any special regulation size. However they can be reproduced very easily in miniature from scrap balsa or Plastikard, using thick wire for the metal runners. Construction takes the form of a box 35 mm by 16 mm by 20 mm, with a slightly sloping front. Thread is used for the tow rope, and if a small hook is made from fuse wire the sledge can be unhooked from the AVRE when required. The sledges were towed 20 feet or more astern of the AVRE from one of the towing lugs; the wisdom of this simple form of dispensable transport, especially when towing explosives, is obvious.

For modellers skilled with the paint brush, the formation sign of the 79th Armoured Division, in which the AVRE served with distinction, was a black bull's head—viewed head on—upon a yellow shield. This should be of the same size and worn in the same position as the red shield transfers supplied in the Airfix kit.

ON ROAD AND TRACK

by Darryl Reach

THE quick rise of the giant American Ford Galaxies to the forefront of British saloon car racing, to which we referred last month, took a tumble on July 6 at Brands Hatch. The second annual International six-hour saloon car race, sponsored by *The Motor*, gave the Jaguar 3.8s a chance to regain their supremacy, if only temporarily.

In practice for this important race, which counts for points towards the new European touring car challenge, the Galaxies showed that they were a match for the Coventry cars, over the twisting 2.65-mile Kent circuit—in the dry. But as several thousand drenched racegoers now know, most of the race was run in a torrential downpour. A Galaxie is a big handful on a dry circuit, so it was hardly surprising that the American cars could not match the Jaguars under these nautical conditions.

After some pre-race haggling over their eligibility, three Galaxies started the race, and finished in 6th, 8th and 22nd positions. The overall race winner was the 3.8 Jaguar driven by Mike Salmon and Peter Sutcliffe, followed by the Roy Salvadori/Denis Hulme 3.8 and the similar car of the German drivers Peter Lindner and Peter Nocker, who are real experts at this class of racing, having now won the six-hour saloon car race at Nurburgring three times in succession. At the post-race examination of the winning cars, however,

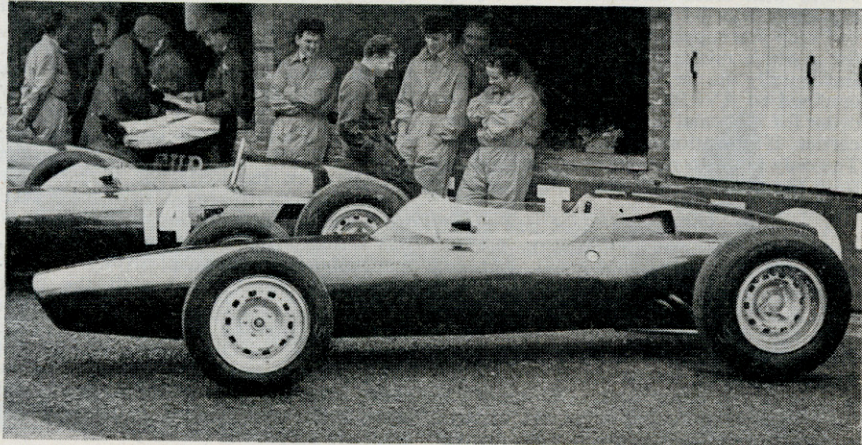
the Salmon/Sutcliffe Jaguar was disqualified, for having bigger inlet valves than were permitted, and Roy Salvadori and Denis Hulme declared official winners.

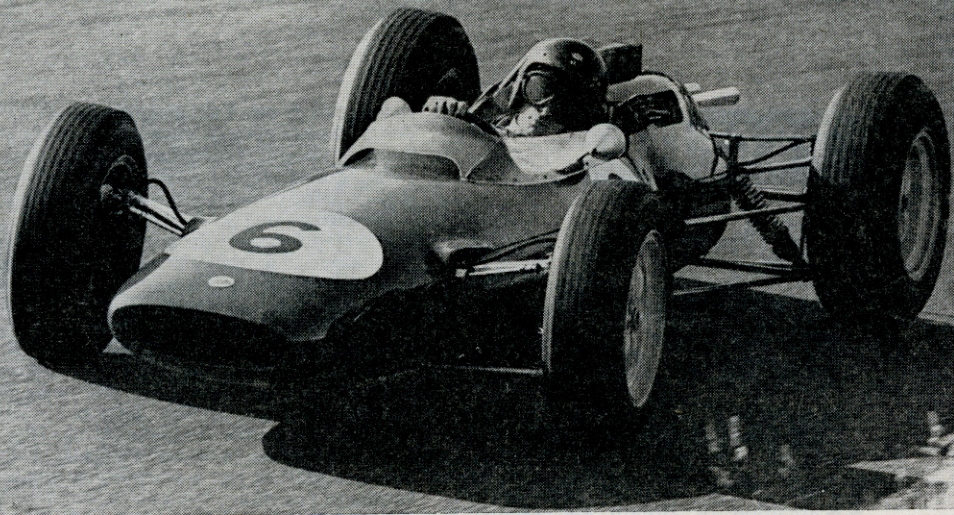
One of the most startling things about this year's race, which was run under just about the worst possible conditions, was that the official winner's average speed of 72.62 mph was only 2.75 mph slower than last year's—when the race was run under dry conditions. Without doubt, this is due chiefly to the vastly improved performance of the latest Dunlop SP and R6 racing tyres, which most competitors used. These tyres also seem to put the larger cars at less of a disadvantage than formerly in the wet.

Had the Galaxies been able to use these Dunlop tyres, they could well have been more competitive. But they are not available in the enormous size necessary to fit these giant American cars.

Jack Sears and the Swedish ice-racing champion Bo Ljungfeldt, were to have shared one of the Galaxies, but their car was withdrawn before the race and they took over a Ford Cortina GT, with which they finished in a most creditable third place overall, won their class and

First racing appearance of the new, sleeker monocoque BRM was at Reims for the French GP. It is considerably lighter than the previous model.





Jim Clark is currently proving virtually invincible with the Lotus 25, having won the last three World Championship Grands Prix, and has a commanding lead in the title placings.

took the important Index of Price award. The other class winners were Tom Trana and Carl Skogh (Volvo 122S), John Whitmore and Paddy Hopkirk (Austin Mini Cooper S), and John Aley and Rauno Aaltonen (Austin Mini-Cooper).

Bearing in mind the adverse weather under which the race was run, it was surprising that so many as 28 cars survived the marathon out of 35 starters—a fitting tribute to the reliability of modern family cars, and attributable in many ways to lessons learnt from competition experience in just this type of event.

Championship takes shape

Jim Clark and his Lotus 25 have so far this year proved an almost invincible combination in the Grands Prix counting towards the Drivers' World Championship, and the works Lotus driver now has a comfortable lead in the title placings. But for the fact that he retired when leading at Monaco, he would have won all four qualifying races so far held at the time of writing, for he won easily the Belgian GP at Spa, the Dutch GP at Zandvoort and the French GP at Reims.

One of his chief rivals, the present world champion, Graham Hill, has not had such a fortunate season. He won the opening race at Monaco, retired at Spa and Zandvoort, and took third place at Reims. At Zandvoort, the BRM team

revealed the first of their new mono-coque cars, which the champion tried out during practice, but did not use for the race.

The car made its first racing appearance at Reims. It is a much lighter machine, of similar design to the 'chassis-less' Lotus 25, and has a six-speed gearbox. Basically, few could deny that the 'old' BRM could not match the speed of the Lotus 25, particularly on the faster circuits. When the new car is finally 'sorted out' it could be a different story, though Graham will still have Jim Clark's brilliant driving to contend with!

Obviously, given continued reliability, it is not difficult to predict that Jim Clark stands probably the best chance of wresting the crown from Hill. But in motor racing nothing is ever certain. It's results that count.

Traffic jam shown here doesn't belong to Piccadilly Circus, it's the first lap sort-out at the start of the six-hour saloon car race at Brands Hatch.



PROFILE

High-flying conversions for the Airfix Wellington

HIGH flying bombers attracted the attention of Britain and Germany in the early stages of World War Two, when specially prepared aircraft became available. For this exacting purpose the Luftwaffe used converted Ju 86s, while the RAF looked to the Fortress 1 and to conversions of the Vickers Wellington, the subject of this month's Profile.

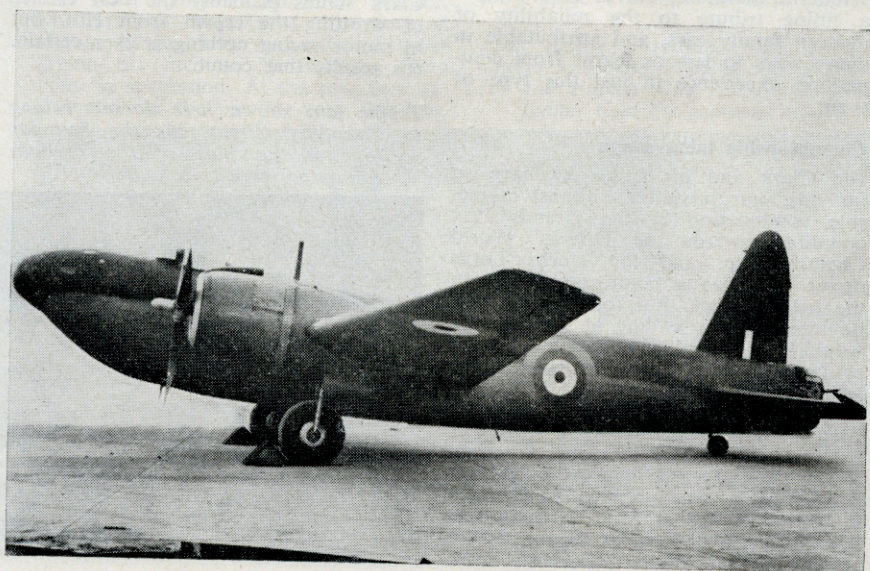
Specification B23/39 had called for a fast medium bomber able to operate at 40,000 feet, and whose crew were placed in a pressurised cabin, which was then a most revolutionary feature. Vickers tendered a Wellington variant, the Vickers Type 407, powered by two Bristol Hercules VIII engines specially designed for high altitude operation, and with a pressure cabin fitted into a

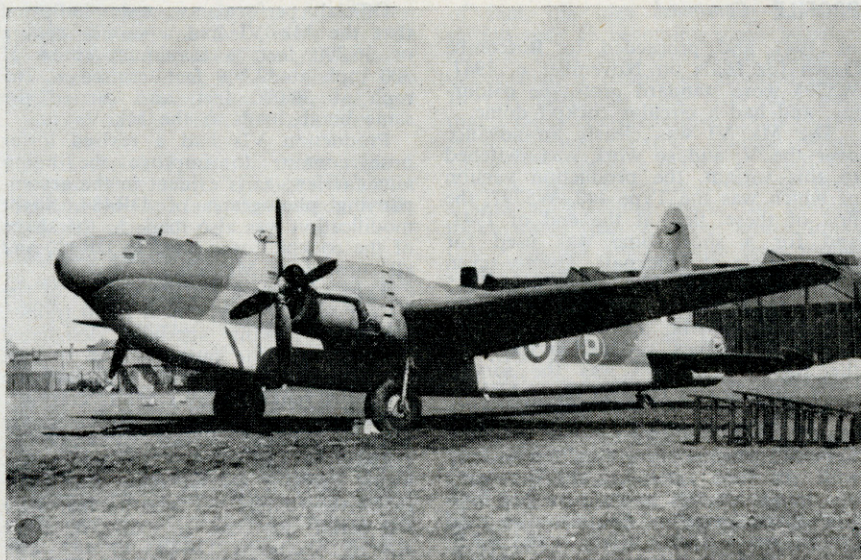
redesigned nose. Two prototypes of the design were ordered when the war commenced, to be conversions of the last two aircraft from a batch of Mk1c, R3275-3299, originally ordered as Merlin X powered Mk IIs.

Development of the cylindrical pressure cabin for the aircraft resulted in some hair-raising structural failures. Delays on the Hercules VIII occurred and the engine required special trials, for which purpose it was tested in one of the gawky Folland 43/34 flying test beds. When the delay on the engines became apparent, it was decided to fly the Wellington Mk V powered by Hercules IIIs. This revision resulted in a new designation for the prototype which became Type 421.

This aircraft, R3298, first flew at Blackpool on October 21, 1940, wearing the standard experimental aircraft colouring of brown-green-yellow. Apart from her nose, in which, slightly ahead of the mainplane, a long pressurised cylinder was fitted, she resembled the Wellington III. The cockpit cover was now an elliptical shape on the top of the fuselage. The bomb aimer's panel was placed in the base of the nose, aft of which a curvaceous slope gave a streamlined, shark-like appearance to the aircraft. A crew of three had been decided upon, comprising a pilot, wire-

R3298, the first Mk V, photographed in 1940.





R3298 in prototype colours and fitted with GEC blowers. She has a red serial and a circular cockpit cover here.

less operator-navigator-bomb aimer and a rear gunner who relied upon an independent oxygen supply. Since the aircraft had been designed to fly high to avoid enemy fighters, the gunner, it was hoped, would barely be necessary.

On March 1, 1940, 30 production Mk Vs (Type 426), to be powered by Hercules VIIIs, had been ordered to Specification B17/40 as W5795-5824 inclusive. Such was official faith in the high altitude Wellington.

The second Type 407, R3299, appeared fitted with a circular cockpit cover resembling an enlarged astrodome, also a feature of W5796, the first and, as it proved, only production Mk V. Forward view was much restricted, and there was precious little head room for most pilots. The navigator sat to the pilot's right and faced the starboard side of the aircraft. The cockpit instrument layout was much modified.

High altitude trials proved disappointing, for many difficulties were encountered. Controls froze up, also the rear turret and bomb doors. Even oil froze, and there were icing problems in and outside the aircraft. A height of 30,000 feet was reached. During 1942 R3298 was flown at Vickers and the AAEE, powered by Hercules XIs with GEC blowers, and was in this form

designated Type 436. As the Type 440 she had Hercules VIs temporarily installed, after which Hercules VIIIs were fitted. R3299, with Hercules VIIIs, underwent engine trials at Filton, and was also tested at the AAEE, Boscombe Down.

Official trials with W5796 showed her to have a top speed of 292 mph at 32,000 feet, and a cruising speed of 233 mph. Her service ceiling was 35,000 feet which, at the maximum take-off weight of 32,000 lb, she reached in 70 minutes. Her range with a 4,500 lb bomb load was 1,560 miles, and the weapon load could consist of 2 x 2,000 lb bombs or 4 of 1,000 lb, 9 of 500 lb, or 18 of 250 lb. Her wing span was 86 feet 2 inches, length 62 feet 6 inches. Four-bladed Rotol propellers were fitted, as on the other high-altitude Wellingtons.

On July 19, 1941, 100 Wellington Vs were ordered to Specification 17/40, whose serial numbers were to be DR471-504, DR519-549, DR566-600. These aircraft were, however, to be powered by Rolls-Royce Merlin 60 series engines. Type No 431 was allocated to this variant, which was re-designated Mk VI. Conversion of the first production Wellington V, W5795, to bring it to Mk VI standard had begun in March 1941, and into this aircraft were installed two Merlin RM6SM engines. She first flew in the late summer

Continued on next page

PROFILE—Continued

of 1941 and proceeded to Boscombe Down for trials on November 6, 1941. W5795 wore standard prototype colouring, and had a circular cockpit dome.

The Mk VI was clearly an advance over the V, and so work was switched to this variant, the production version of which was the Type 442. W5797, the first of these, flew at the end of 1941, and for a short time was used for engine trials at Hucknall. Twenty-seven others planned as Mk Vs—W5798-5815 and DR471-479—were subsequently completed as Mk VI and fitted with Merlin 60 engines, production forms of the RM6SM. W5798 was the service trials aircraft and reached the AAEE in February 1942. W5800, first flown in March 1942, subsequently became the Type 443 when she was fitted temporarily with six foot extensions to her wing tips in an attempt to improve her high altitude performance. She was also used for oxygen regulator trials at the RAE, where W5802 undertook high altitude tests aimed at improving the workings of control surfaces. She had been originally delivered to No 109 Squadron at Tempsford in March 1942, where she had spent a little over two months. DR480 and 484 were fitted with Type 423 bomb gear, enabling them to carry a 4,000 bomb, for which reason special efforts had been made to lighten them as far as possible.

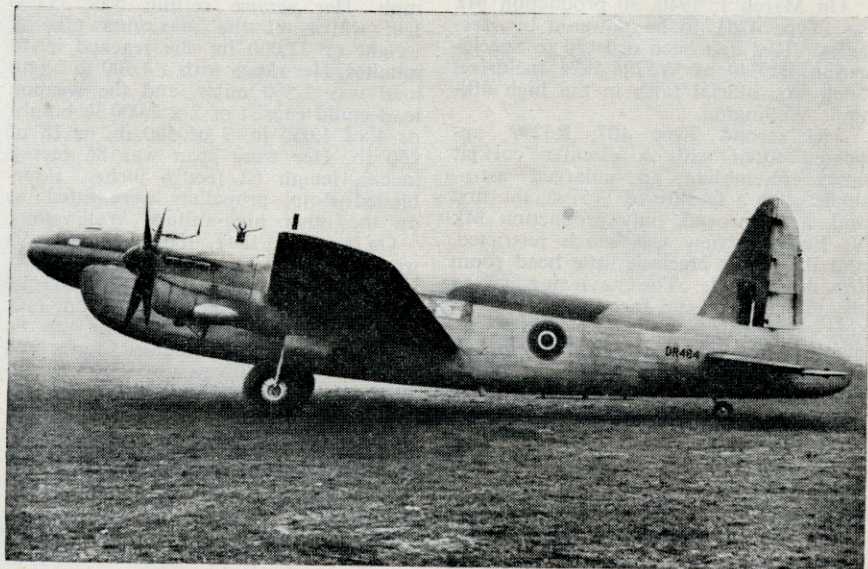
Official performance tests indicated that the Mk VI had a service ceiling of 36,700 feet, a maximum speed of 300 mph at 32,000 feet, cruised at 265 mph at 30,000 feet, and carried the same bomb loads as the Mk V.

Production VIs had a revised lower nose contour to improve the bomb aimer's view, as is evident in the accompanying photograph of DR484. Slight modification was also made to the shape of the cockpit cover fitted to DR480 and all subsequent Mk VIs.

Type 449 was a further variant of the VI for service as a special radio trainer, DR481-483 being specially designated Mk VIA for the purpose. The first of these served briefly with 109 Sqn, the other two had brief lives before crashing.

Stemming from the former came the VIG operational aircraft, of which 24, DR485-504 and DR519-527, were completed carrying special radio and radar gear. Accordingly 'G' was applied after the serial numbers of many of these aircraft, including DR485 to 487, 489. DR528, the final Mk VI completed at the end of 1942, was a standard Type 442. Other sub series were known in the Service, such as VIB with engines of a different series and others with different interior layouts. DR483, 485-489, 491-493

DR484, a production Mk VI with the revised nose contours and tail turret removed to lighten her load. She has a grey-green-blue finish.



and 494, and all subsequent VIs, had Merlin 62 engines. DR490 and 493 both had a Merlin 60 and a 62.

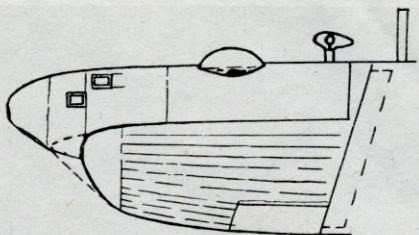
Only four Wellington VIs entered squadron service. W5801 was delivered to No 109 Squadron at Tempsford on March 23, 1942, and on the 26th W5802 arrived there. No operational flying was carried out, merely squadron trials. W5801 proceeded to No 18 MU on July 1, 1942, was reduced to spares and finally struck off charge on August 11, 1943. W5802 was despatched to the RAE on May 17 and later became 5750M. Her life was terminated on November 22, 1945. DR481, which was first delivered to No 33 MU in October, 1942, went to No 109 Sqn on November 11, 1942 and proceeded to 51 MU on January 28, 1943. She was then used to provide spares. DR485/G, the other machine used by 109 Sqn from December 19, 1942, reached 51 MU on January 17, 1943, where she was struck off charge on April 6, 1943. Consideration had been given to the use of these aircraft to carry target indicator flares for the Pathfinder Force, which formed in August 1942, but the pressure fuselage was found to lead to complications. None of these Wellington VIs was ever flown operationally.

During 1943 the VIs trickled from service, most having made their way only as far as MUs, widely scattered. Many were eventually destroyed at Cowley, and W5816-5824, DR529-549 and DR566-600 had been cancelled long ago.

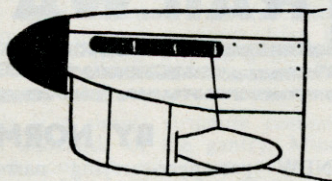
Conversion of the Airfix Wellington kit to either Mk V or VI presents few problems, since the wing and tail units can be assembled as for the Mk III. The fuselage triangular windows need to be dispensed with and, ideally, replaced by a long strip of windows, a feature of the early marks of Wellingtons, and also the V and VI.

Cut off the nose of the assembled fuselage, and replace it with a wooden block cut and shaped as indicated by the diagram. On my own model I decided against attempting to hollow out the block, for there seemed little point in this. The transparent panels and cockpit cover were merely placed over the holes or depressions. To ensure that the block fits tightly, cut as indicated. The 'double bubble' effect on the nose terminates where the pressure cabin fits into the upper section.

Remove the forward portions of the engine nacelles as depicted and carve wooden engine cowlings to the shape



Depicted above is the nose shape of the later Mk VIs, with the earlier shape shown by the dotted line. The final cockpit shape is also indicated. The cockpit cover was slightly offset to the port side of the fuselage top. Below is shown the outline of the Merlin 60 engine cowling. It can be easily tapered and shaped to fit the existing nacelle.

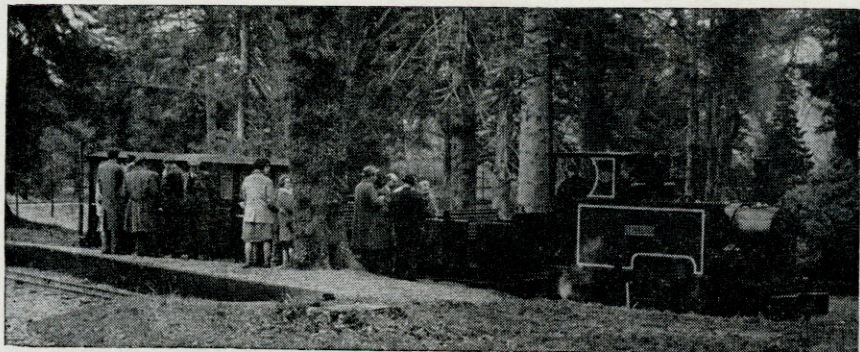


of the Merlin 60. These can easily be fitted to the remaining part of the nacelle. Two spinners from an Airfix Lancaster would add a more professional finish to the model. If you do this remember that four-bladed propellers were fitted to these Wellingtons. If you prefer a Mk V, then you will need to make new engine cowlings and retain the older shape of the under portion of the nose.

One of three camouflage schemes may be applied to the model. Prototypes were finished in dark green and dark earth, and had yellow undersurfaces. Spinners were black, roundels as supplied with the kit supplemented by underwing roundels.

Most of the production VIs and the solitary V were camouflaged in dark green and medium grey and had PRU blue sides and undersurfaces. As with the 90 Squadron Fortresses, some aircraft differed by having azure blue undersurfaces. One I frequently saw in July and August 1942 flying from Stradishall was a rich PRU blue overall. It had red and blue roundels, whereas those previously mentioned had the standard type. On the one occasion I saw the production Mk V it had a grey-green-blue finish, and red and blue roundels only!

M. J. F. Bowyer



RAILWAY REVIEW

BY NORMAN SIMMONS

A NEW passenger-carrying narrow gauge railway is a rare event! I have, however, received details of a fascinating little 18 inch gauge line that has just been built in Devon. Known as the Bicton Woodland Railway, it is situated on a private estate at East Budleigh, $2\frac{1}{2}$ miles from Budleigh Salterton and about half-way between Exmouth and Sidmouth. The private estate, known as the Bicton Gardens, is open to the public, from the week before Easter to the middle of September, from 2 pm to 6 pm, except on Bank Holiday week-ends when the times are 11 am to 6 pm. Trains run during these times.

The railway was conceived in 1961 and completed in time to open the gardens to the public this year. A very commendable achievement. A fine little illustrated booklet called 'The Bicton Woodland Railway' tells the full and fascinating story, and is available price 1s 10d post free from the Agent, Rolle Estate Office, Exmouth, Devon.

Basically, the track layout is a single line with return loop, but it twists its way around the gardens to give passengers an excellent view. The railway has been designed to provide the best scenic views, and has necessitated several quite high embankments and gradients of something over 1 in 30. The total journey distance is just short of a mile.

Currently, the sole locomotive is an

oil-fired 0-4-0 tank, with $8\frac{1}{2}$ inch x 12 inch cylinders and a boiler pressure of 160 lbs per sq in. It weighs $11\frac{1}{4}$ tons fully laden. The engine was built in 1916 by the Avonside Engine Company for use in the Royal Arsenal at Woolwich, which accounts for the name 'Woolwich' being retained. It is hoped to add a second locomotive when a suitable one can be located and purchased. Rolling stock consists of both open and closed bogie passenger coaches and goods rolling stock, some with new home-built timber bodies.

In contrast to other favourite holiday centres, south-west England has, until now, been somewhat starved of narrow gauge railways. There is no doubt that the Bicton Woodland Railway will be a popular tourist attraction in this holiday centre of Devon, and a mecca for narrow gauge railway enthusiasts.

New wagons for Ford traffic

I mentioned last month seeing some new four-wheeled box vans for the Ford Motor Co outside Ashford works. Seventy-five of these wagons are being introduced by the Eastern Region to work a regular high-speed shuttle service between Dagenham and the new Ford factory at Halewood, Liverpool. They have been designed in conjunction with Fords to ensure quick loading and unloading, and four sliding doors permit

access along the whole of the wagon side. Each wagon is 34 ft 8 in long, with a maximum load of 22 tons, and is equipped with power brakes and roller bearing axle boxes.

A train leaves both the Ford factories each night and arrives at its destination early next morning, thereby ensuring a continuous service and constant supply of wagons. The wagons are distinctively painted in blue, bearing the Ford motif, and are an excellent example of the new ideas in freight train traffic as envisaged in the Beeching Report.

Further ER acceleration

Eastern Region summer accelerations reported in the June issue have been further extended by the introduction of a new timetable on the Great Eastern line. The Clacton service is now completely electrified and the new trains described in the March issues are now providing an excellent service. Speeds of between 80 and 90 mph are commonplace and, in fact, necessary to maintain the schedule which involves averages of 67.82 mph for the 13 miles between Witham and Colchester, and 67.06 mph between Shenfield and Chelmsford.

Deltic mileages

Considerable surprise was expressed in some quarters when it was learnt that the prototype English Electric Deltic diesel-electric locomotive had been retired for presentation to the Science Museum after only completing some 450,000 miles. In fairness to this particular locomotive, it must be pointed out that it was a prototype and its mission was accomplished when it paved the way for the production models that are now doing excellent work on the Eastern, North Eastern and Scottish Regions.

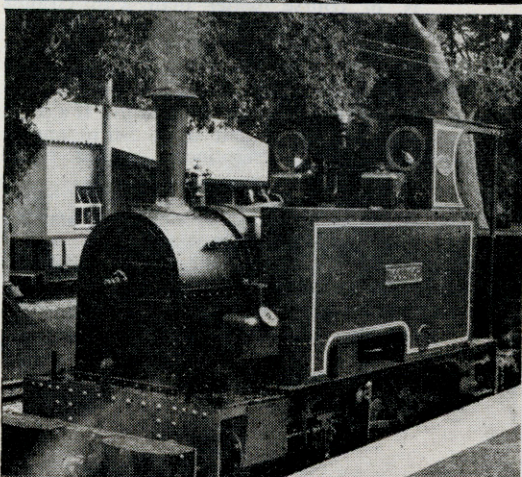
One of the production Deltics allocated to the NE Region, D9011, was named *The Royal Northumberland Fusiliers* at a ceremony held at Newcastle Central Station on May 28 and, at the time, it was announced that the locomotive had already covered more than 210,000 miles. This is pretty good going, considering it was only delivered in August 1961, and it seems certain that D9011 at least will beat handsomely the

prototype Deltic's mileage. More NE Region Deltic locomotives will be named later in the year.

Locomotive notes

Reported deliveries of new BR locomotives are: D1020 *Western Hero*, D1021 *Western Cavalier*, D1063 *Western Monitor*, D1064 *Western Regent*, D1065 *Western Consort*, D1066 *Western Prefect*, D6824-8, 32, 37-49, 59, D7082-5 to the Western Region; D5184, 5, 91-9, D5200-5, E3082 to the London Midland Region; D1518-26 to the Eastern Region; and D8516, 8, 20, 29-31 to the Scottish Region.

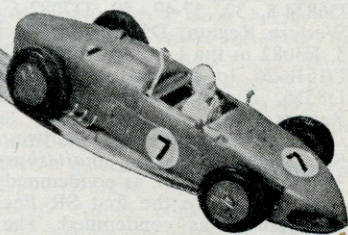
The Western Region list two former SR Pacifics, 34035 *Shaftesbury* and 34074 46 *Squadron*, as condemned during May. These are the first SR Pacifics to be reported as condemned. The LMR have withdrawn three more Coronation Class Pacifics; 46221 *Queen Elizabeth*, 46247 *City of Liverpool* and 46252 *City of Leicester*. The numbers of former LNER Pacifics are now also considerably reduced and three more A4s withdrawn recently include 60015 *Quicksilver*, 60018 *Silver Link* and 60022 *Mallard*, which has been withdrawn for preservation.



Above, left: Picturesque woodland setting of the Bicton Woodland Railway—down train sets down passengers at Pine Junction. Above, right: Line up of the new wagons specially built for Ford Motor Co traffic. Right: Close up of the locomotive Woolwich of the BWR.

WHEELSPIN

by Bert Lamkin



Rules and regulations for slot racing

IT appears that there is a certain amount of discussion taking place in the miniature car racing world on rules and regulations. The object is, as I understand it, to establish uniformity in running inter-club events. This is not such a bad thing, as it can be very frustrating to have an entry rejected through differing rules. This brings me to an important aspect, not yet mentioned in these articles, and that is running our miniature races on full-size practice. An event run on 'official' regulations, even though modified, is more interesting than those which are conducted in somewhat haphazard fashion.

In full size, the race programme is compiled to include races for various types of cars. In club meetings the scope is, of course, wider than with Grands Prix. So, from the miniature field, cars should be selected to race against each other within a particular formula. In other words one should not see 1950 GP cars competing with 1960 Minis. If a Mini with the equivalent of a 5-litre engine appears, the 'scrutineer' should reject it.

After acquiring a scrutineer's 'ticket', the car practises to obtain a starting grid position. The procedure is, of course, that the fastest man takes the 'pole' position—this is the inside position with regard to the first bend after the start. This can be achieved on our

small circuits by either timing with a stop watch a given number of laps, or by balloting. The grid positions are then determined by the fastest, the next fastest, and so on through the field.

With our cars lined up, the next thing is to start them. There are various ways of doing this, from dad shouting 'go!' to junior sticking a pin into you. But a better idea is to incorporate a proper signal—either a small light, or a miniature figure with a Union Jack. I prefer the latter—he can be on a small rostrum a few scale yards beyond the start line. The right arm can be actuated quite easily by remote control, either electrically or mechanically. A point solenoid from the model railway mounted in the base of the rostrum and wired to a press button with a suitable power supply, or a length of Perlon taken from the figure's arm through suitably positioned guides to the actual starter, are two suggested methods. Bearing in mind that the cars start to move when the flag has fallen—officially it is held aloft for five seconds—any creeping by competitors could be penalised.

Having started the event, one should consider the finish. Again the use of a definite signal is desirable. If you are using lights, with presumably green to start, the finish would be indicated by red. With regard to the small man on the rostrum, depending on its actual position, the Union Jack could be replaced with a black and white chequered flag. Otherwise, a second figure complete with flag could be used, preferably on the opposite side of the track to the starter. This will depend entirely on the position of the start line.

In actual practice, a last lap board is shown to the leader, but as this would be rather small if to scale, and certainly not seen by the 'hairy' ones, it is probably best to forget it. If you favour the light system, then a yellow could be used for the last lap.

Lap recording

In between the start and finish there is the question of recording the laps. This, again, can be either manual or electrical. If you have the rest of the family interested, then a piece of graph paper and a pencil supplied to the lap recorders will suffice. If more than two cars are racing it is advisable to have a recorder for each car.

Automatic lap recording can be achieved in several ways. One can buy purely mechanical units to insert in the circuit—they are usually fitted to a sec-

tion of actual track and simply replace an existing straight. Operation of these is by the passing car depressing a lever—one in each slot. They are fairly reliable, once adjusted to the cars in use. If you are using your own make of track, then the mechanism will need a little adaptation.

The other method is electrical, or perhaps I should say electro-mechanical. Instead of the cars depressing a lever, they complete an electrical circuit. In this case the recorder is virtually a relay, the armature movements of which rotate a wheel in a series of steps—each step being a completed lap. Although this involves some effort to produce, it is pretty reliable in use, with the added advantage of the actual recording dial being sited in the most suitable position. I will deal in a subsequent article with an actual system that has been used.

Electronic counter

A further method of lap recording, which is possibly the best and, incidentally, the most expensive, is electronic. This was the system used on the layout at the Racing Car Show. In this case, the passing car interrupts light falling on a cadmium cell. This gives maximum tolerance of the car's size, weight and speed. Various refinements were incorporated, including three displays of race positions and a pre-determined number of laps using a normal telephone type of dialling, the last lap always indicated appropriate to the number of laps raced. The race control panel was also included, which gave complete control over the circuit and competitors and proved very useful for dealing with the 'clueless'. In view of the fact that this installation was built for a public exhibition, any attempt to introduce it into the average house would, I feel, be fraught with difficulty.

Reverting to regulations, the set I used at the show might be worth adopting. These were as follows: (1) Grid positions and cars determined by ballot. (2) Each competitor has four laps individual practice. (3) Cars only to be handled by circuit officials. (4) Any interference by a competitor with another car or controller means disqualification. (5) Cars leaving the course will, if causing an obstruction, be replaced after other cars have proceeded. (6) Any car completely inverted will be regarded as having retired. (7) Any mechanical or electrical fault during the first lap will result in that race being restarted. (8)

The decision of the clerk of the course is final.

The advice I gave at drivers' briefing was to the effect that the car that stayed in the slot was invariably the winner, very ably demonstrated by World Champion Graham Hill when he raced on the show circuit.

If, on the other hand, you prefer to just bash on regardless, then good luck to you. I found the good drivers on the full size circuits were usually the best on the miniature track—a case of the delicate touch.

Most of the commercial controllers are not quite fine enough to give complete control, compared with a full-sized car's throttle. Only a portion of the travel directly affects the motor's revs, and it is this factor that calls for the delicate touch. So make sure that the slide is free and moves very easily—a graphite pencil will act as a useful lubricant. Another point on controllers is that after continued use they get warm, which is increased if held tightly. If you have a very full programme on hand it is probably worthwhile having a spare set to plug in. With the above aspects in mind, I hope one day to produce a device giving a greater degree of control—and I don't mean a second guide pin located at the rear of the car!

At this point, and associated with the foregoing, a suggestion could be made. If you are holding a miniature Grand Prix over umpteen laps, you could change drivers and controllers at a given distance, which could constitute, in effect, a pit stop, causing some rather interesting activity in the opposite camp.

More racing clubs

Kirkby: R. Young, 29b Burnard Crescent, Northwood, Kirkby, Lancs.

St. Leonards: K. A. White, 6 North Street, St Leonards, Sussex.

Tamworth: G. Renshaw, 17 Spenser Close, Leyfields, Tamworth, Staffs.

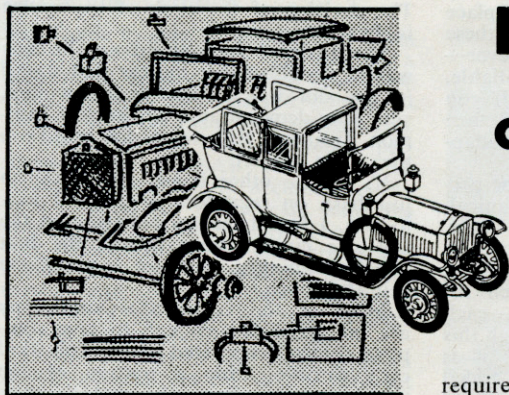
Ashton-under-Lyne: W. Gidman, 209 Margaret Street, Ashton-under-Lyne, Lancs.

Bolton: C. W. Ainsworth, 84 Gilnow Road, Bolton, Lancs.

London: I. Calvert, 61 Elgin Crescent, London, W11.

Portsmouth: H. Owen, 181 Albert Road, Southsea, Hants.

Bournemouth: D. Naylor, Flat 1, Maxwell Court, 279 Charminster Road, Bournemouth.



Custom Chevy

We were pleased to receive another Monogram car kit for review this month from BMW Models, who have submitted the '55 Chevrolet customising kit. It is not quite so sensational as the Duesenberg reviewed last month, but is up to the usual high Monogram standard and in their constant 1:24 scale. The finished model measures eight inches long, and costs 23s 4d.

The main body parts are moulded in 'Teal Blue' plastic, with chassis, engine and body interior in cream, and headlamp lenses, windcreens, etc, in clear plastic. The wonderfully illustrated eight-page instruction booklet makes everything crystal clear, with all the stages in the construction illustrated by actual photographs. Every part fits perfectly, and there was never any difficulty in making the model.

I chose to make the stock version, as readers are better able to judge the accuracy of a finished model from a photograph of a familiar standard production car. The stock car can be finished as a hard top or a hood-down convertible. Additional customising parts include choice of a continental type roof, or a fully glazed clear plastic bubble roof, racing type bucket seats and seat belts, wheel spats, alternative chrome grills and wheel discs, etc. The engine can also be souped up with six carbs if required, and there is a TV set for back-seat viewers.

Construction follows the orthodox method, with separate chassis containing detailed replica of engine, front and rear suspension and excellent rubber-tyred wheels that revolve freely. The one-piece bodywork is cemented to the chassis, but the engine can be viewed by a lift-up bonnet cover. Rather more painting is

New kits and models

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required with this kit than with other Monogram kits we have received, but a convenient list of items requiring attention makes this job much easier and saves continued opening and closing of paint pots and wiping of brushes.

One disappointment with the kit is that the prominent chrome style lines along the side of the body are moulded with the bodywork in 'Teal Blue' plastic. They therefore need picking out in silver paint, which is a very poor substitute for chrome and soon wears off. This is emphasised by the sparkle of the front and rear bumpers, and other bright chrome parts supplied in the kit. It would surely have been a simple matter to mould these lines in chrome plastic, to



*Monogram 1955 Chevrolet (top) and their
Grumman F6F-5 Hellcat.*

cement to the bodyside during construction.

One general point, not related to this kit in particular but to all plastic car kits in general. When are we going to have opening doors and boot lids? The die-cast miniature car people are streets ahead in this respect, and it would surely be easier to provide these facilities in the larger scale plastic model kit. What about it, plastic car kit firms, and how do all you modellers feel about it? *N.S.*

Trio of twins

We have also received three other ITC Midget Model kits from BMW Models this month. Each kit contains instructions and parts to make two separate plastic models, from 2½ inches to 3½ inches long. They include one car kit, with parts to make a Thunderbird and an MG Midget, and two kits for models of old-time horse-drawn vehicles. The horse-drawn vehicles are quite the most successful models and they are very attractive when completed and painted. One kit, moulded in white plastic, is for a four-wheeled Surrey and a three-horse steam fire pump. The second kit is moulded in dark brown plastic and is for a Prairie Schooner covered wagon and a Wells Fargo stage coach. The detail is fair for these small-scale models, and construction is straightforward from the instruction sheet.

I am afraid the car kits did not really convince me, as they lack precision and faithfulness of outline. They suffer in comparison with die-cast miniature models of about the same size that can be bought ready-made and painted at less cost. I can, however, recommend the horse-drawn vehicles as attractive models that are fun to make and, when properly painted, quite realistic to view. Each kit costs 5s 11d. *N.S.*

Accurate Hellcat

The latest Monogram kit to be added to their already top-rate line of quarter-scale models is a Grumman F6F-5 Hellcat. This 53-part model is well in the way of being the best yet, and has all the gimmicks for those who want them, with the value of being extremely accurate in its presentation.

In making up the model I found nothing to complain about. There was no 'flash', all parts were a perfect fit and the gimmicks worked with the greatest of ease and did not deter from the accuracy. Moulded in both blue and black plastic, the aircraft has the added advantage of two sets of transfers for



Three two-part kits—all by ITC.

either a Navy or Marines squadron. The plans and instructions were equally as good as anything Monogram have yet produced, and such things as rivet detail, undercarriage legs, armament and so on—which so frequently are the cause of criticism—have all been carefully considered by the manufacturer.

In fact, there was only one thing that caused criticism, and that didn't concern the model. Looking at the box lid, I find that our Hellcat was called the 'F65-5' which, of course, could be a printer's error, but which the model maker is bound to spot at once. Price of this kit is 17s 6d, and supplies are available from BMW Models, Wimbledon.

A.W.H.

Super Seven

A splendid replica of the Lotus Super Seven has now joined the Lotus 18 and 22 models already available in the range

Continued on next page

New kits and models—Continued

of hand-built 1:24 scale models produced by Auto-Models Ltd, of 70 Finsbury Pavement, EC2. The Super 7 is finely detailed, with a moulded resin-bonded glass fibre body, and has headlights, windscreen, fascia panel, tonneau cover, spare wheel and exhaust pipe among its attractive features.

This somewhat specialised model is available in four different colours, with either flared or cycle type front wings, and costs £6 6s. *D.R.*

New points and pack

As briefly mentioned last month, Hornby-Dublo have introduced a new range of inexpensive turnouts known as the Simplec, samples of which we have now been able to examine. Both left- and right-hand points are available, hand-operated, at 7s 9d each, and they are, of course, to the standard Hornby-Dublo 16.5 mm track gauge. The track base is moulded in strong, dark brown plastic, matching existing Hornby-Dublo track, and the through running rails are drawn nickel silver. The switch blades are strong metal casings and each blade is pivoted at the frog end. Only the minimum amount of the frog is cast in plastic, to give enough insulation, and the remainder is a metal casting. This should give long life and good current collection.

The points have a switch incorporated in the blades which automatically provides an electrical circuit in the rails along which the train will travel, provided of course that current is fed into the toe of the point all the time. The action of the switch blade is positive and the tiny spring incorporated in the design snaps the blades open and shut with precision. The track base is commendably free of obstruction between the sleepers, and only two pairs of sleepers are filled in solid. Despite this the track base is strong and should withstand considerable handling.

It is a pity the operating lever is mounted in such a large base as this does restrict usage of the point. For instance, points of the same hand cannot be connected heel to toe, which is sometimes useful when arranging a bank of parallel sidings. Two left-hand points or two right-hand points make a trailing or facing crossover, respectively, with the standard Hornby-Dublo spacing between running rails. Each point pack includes full instructions for the use of these points and correct two-rail wiring, in-

cluding a reverse loop. They are excellent value at the price.

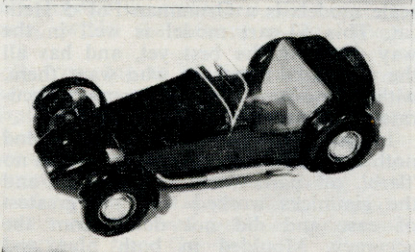
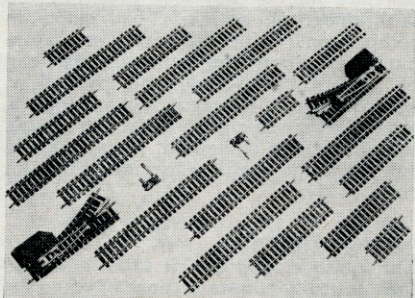
Also released by Hornby-Dublo is their new Track Pack No 1, consisting of ten full straight rails, six $\frac{2}{3}$ straight rails, three $\frac{1}{3}$ straight rails, one right-hand Simplec point, one left-hand Simplec point and two terminal connectors. This is an excellent way to build up from the basic train set oval, and the leaflet enclosed in the pack gives three suggested track formations that can be laid out. The complete pack, illustrated on these pages, costs 45s. *N.S.*

Three for one

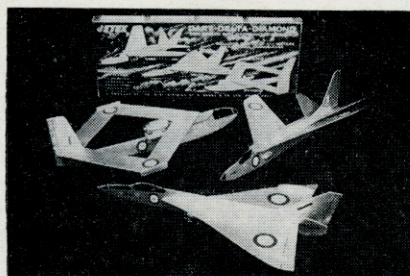
Jetex have recently released a new 3-in-1 gift pack, with which can be built three separate silhouette flying model aircraft—the Dart, the Delta and the Diamond. Full assembly instructions for the die cut printed balsa parts are given on the back of the colourful box, which also contains two Jetex 50c motors (intended to allow for a quick 'change over'), 20 fuel pellets, and operating instructions, together with colourful transfers from which to enhance the appearance of the finished models. This bumper pack sells for 21s, and is especially suitable for beginners to this branch of modelling. *D.R.*

Six new gift sets

Six new sturdily-boxed Dinky Toys gift sets have recently been announced, each covering a special group of vehicles. Set



Hornby-Dublo Track Pack No 1 (top) and Auto-Models Lotus Super Seven.



Top to bottom: *Jetex 3-in-1 gift pack; Matchbox fire station; and one of the new Dinky Toys gift sets—'Mayfair'.*

No 1, known as the Goodwood sports car gift set, comprises an Austin Healey Sprite, an MGB, an E-type Jaguar, a Porsche coupé and nine miniature figures. The price is 22s 11d.

The five other sets are as follows: No 2 (Touring), with a four-berth caravan, a Rambler station wagon, a 3.4 Jaguar, AA motor cycle patrol, Atlas bus and a Healey sports boat on trailer (price 25s 11d). No 3 (Mayfair), with a Jaguar Mark 10, Rolls-Royce Silver Wraith, Mercedes-Benz 220SE, Bentley Series S coupé, Rolls-Royce Phantom V, Austin 7 Countryman, and four civilian figures (price 35s 11d). No 4 (Emergency services), with a set of petrol pump attendants, a set of fire station personnel,

an American police car, a Superior Criterion ambulance, an airport fire tender (with flashing light) and a Superior Criterion ambulance (with flashing light)—price 36s 11d. No 5 (Farm Equipment), with a Massey-Harris tractor, Halesowen harvest trailer, Massey-Harris manure spreader, a disc harrow and a hayrake (price 21s). No 6 (Site Building) with a Muir Hill 2-WL loader, a lorry-mounted concrete mixer, a Blaw Knox bulldozer, a Muir-Hill dump truck and an Auclid rear dump truck (price 57s 11d). One of these new sets is illustrated this month. D.R.

Car for the job

New Matchbox models this month are a fire station and a fire chief car. The 00 scale fire station is modelled in tough plastic with working double doors, fireman's pole and authentic multi-coloured transfers. It comes fully assembled and measures 9 inches by 6½ inches by 4 inches. The price is 10s 6d.

Ready for action with the new fire station is the 00 scale fire chief car, which has windows, seats, steering wheel, imitation alarm 'flasher' on the roof and correct 'fire chief' transfers. The model is 2½ inches long and costs 1s 9d. D.R.

IN THE AIR—Continued

by Mysteres and Etendards of the French Air Force and Navy. The latter added to their eleven-plane team by having an Etendard IVM and IVP doing the now well-known 'buddy' refuelling act, and the Mysteres turned on their SEPR rocket boosters to disappear into the gathering haze in a vertical climb.

In discussing the many aircraft shown at Le Bourget, one can merely show high delight from the spotter's point of view. Never was there such a collection. But what of the prospects for all of these magnificent aircraft in the world markets? Personally, I think their chances are very small, as the need is nowhere as great as all that. The production lines need quantity to make a break-even price on the product, and it is only in the light aircraft market where this may be done. If nothing else, this grand collection of the best of the international aircraft industry showed, more than ever before, the need to rationalise production and back the engineers by a sales team capable of working without political pressures, in a market willing to take the best aircraft rather than that which suits the government of the day.

Readers write . .

LETTERS TO THE EDITOR

Facts on the Fortress

I read Mike Bowyer's Fortress 'Profile', in the December 1962 issue of AIRFIX MAGAZINE, and the selection of comments on it in the February issue. The whole thing has been very stimulating, but it cannot be closed until some glaring mistakes are corrected. To my knowledge these have not been commented upon.

I quote: 'Many modifications were made to the armament of the B-17F to produce the B-40. . . Twenty B-17Fs were converted to this type . . . One was 229743 of the 91st BG with LG T aft of its fuselage insignia . . .'

In actual fact, Vega at Burbank modified a batch of thirteen B-17F-10-VEs, serialised 42-5732 to 42-5744, to the YB-40 for testing in combat. Originally a Boeing-built Fortress had been converted to the XB-40, which had been tested in the United States. All YB-40s were attached to the 92nd BG, although they did fly with other groups. The aircraft did not fly operationally after July 1943. William Green says 20 aircraft were converted to YB-40s, in *Famous Bombers*, but Ray Wagner, author of *American Combat Planes*, has stated in a letter I received from him that there were 20 B-17F-10-VEs, and the first seven were not converted, which is in agreement with my findings from other sources.

Even so, the 91st BG aircraft 42-29743 is so far removed in serial number from those that I cannot see where Mr Bowyer's information could have come from. My only suggestion is that it was modified in the field for purposes parallel to, but not connected with, the B-40 project. I would like to hear from Mr Bowyer about this aircraft, and from any other readers who would like to get in touch with me re this subject of mutual interest.

STEPHEN P. BIRDSALL,
Sydney, Australia.

Mike Bowyer comments: 'It is commonly accepted that the initial batch of 13 B-40s represented the entire production batch, although other evidence exists to suggest that, while 20 were procured, the failings of the type caused the remainder to be converted back into B-17Fs. These machines were all taken from the batch 42-5725 to 5744, which were B-17F-10-VE. The 92nd Bomb Group was re-activated at Alconbury in April 1943, and to this unit went 12 B-40s. They were placed into four flights, which subsequently operated with other Groups, the 91st among them. The first operation in which the B-40s took part was on May 29,

LETTERS to the Editor can only be answered in the magazine. However, we are always pleased to receive your comments and pictures, which will be considered for publication. Readers whose letters are published each receive a free Airfix kit of their choice. Submitted material and pictures can only be returned if accompanied by a stamped addressed envelope, and the Editor cannot accept responsibility for safe keeping of any such contributions, neither does he necessarily agree with comments expressed by correspondents in the letters column.

1943. The B-40s which I saw all wore the same colouring as the B-17Fs, the latter with the 92nd Group in April 1943 including 229685 and 229689, which had a most curious marking under their fin serials, consisting of a white line underlining the digits and four white lines below at right angles, markings carried by most of the 17Fs of the Group at the time.

'The 91st Group at Bassingbourn had amongst its equipment in September 1943, 229743 with the "A in a triangle" fin marking and usual codes, etc. What was unusual was that it was identical to the B-40s, and was indeed referred to as such during a visit I paid to the Group, and recorded by them as such. This machine was a B-17F-70-BO at birth, but this designation had been overpainted on the nose.

'Many rumours have circulated about heavily-armed B-17Fs, but one that I did observe at close quarters which seems to have escaped is a B-17F with a chin turret, as on the 17G, and a further chin turret placed on what amounted to being a tray immediately aft of the chin turret. She also served with the 92nd in the summer of 1943.

'I'm not prepared to accept your statement, Mr Birdsall, that there were "some glaring mistakes" in my article. You see, I gathered the information at the time—first hand! It could well be that the B-17 with the 91st to which I referred was brought up to B-40 configuration, but that it was a B-40 I've not any doubt.'

Top of the form

I am a keen Airfix modeller and already my brother, who is only four years old, has started to fill his room with models. My mother also collects the Airfix range of galleons, which are now displayed on the mantlepiece. As for my sister, she has so many figures—all Airfix, of course—that my mother has to put them into the attic for safekeeping.

There aren't any model shops in Llandyssul, which is where I live, so that every time my sister goes to Carmarthen with a school pal she gets my 'shopping'.

In school, at the end of term, we have

model competitions and an Airfix model nearly always takes the first, second and third prize. A great favourite of my school friends is the Airfix Auster, which has claimed a prize in the model competition many a time, and will probably be just as good this term.

My railway rolling stock comprises nearly all Airfix models, and I don't think I shall stop collecting for years, as I am only 11 years old now.

DAVID SELCON, Chepstow, Mon.

Conversion kits

While the idea of a conversion kit would undoubtedly appeal to a large number of modellers who have not the time or skill to make new nose pieces, etc, for aircraft conversions, there would probably be a far greater number who would be most annoyed at having to pay more for a kit containing spare wing sections, nose cones and engine nacelles which they had no intention of using!

Perhaps Airfix could include in their

AIRFIX ABROAD

Well-known Sydney retailers, Nock and Kirby Ltd, have developed this permanent Airfix section, covering kits, Beta Bilda sets and Motor Racing. The section was started in conjunction with the Australian Air League Week, and has since become a focal point of all hobby enthusiasts in Sydney. The man on the right of the picture is Bill Worthington, Sales Promotion Officer of the Airfix Australian distributors, Liberty Trading Co Pty Ltd.

Ju 88 kit (which I hope will be forthcoming) a voucher enabling the purchaser of the kit to obtain the Ju 88-188-288-388, etc, conversion kit at a reduced price, the same conversion kit being available at the normal price in shops.

Another thing which I think would be well received is a set of plastic gear wheels, worms, bevels, etc. This would surely have a wide appeal for modellers of all descriptions. The gears could be used for making cranes, working turntables, miniature gearboxes, motorising aircraft, and wagon loads, to mention only a few possible applications. These gears would be best if moulded in that soft plastic that Airfix soldiers, etc, are made from.

R. WHITMARSH, Wirral, Ches.

Car conversions

I am a keen modeller of modern cars and have a few tips that I feel may be useful to anybody interested in car modelling. I have made all the modern cars in your series (by the way, I think they're excellent!), and every one of them has been modified. For spare parts I often turn to other Airfix kits. For instance, on the 1930 Bentley there are quite a few parts that are useful. Starting from front to back: two SU carburetors on the supercharger—suitable for the Mini or perhaps a hot Dauphine. The steering wheel (with the centre filed down, the two little projections each side of the centre cut off, then the spokes painted silver—with perhaps black dots

Continued on next page



Readers write—Continued

to represent holes—and the rim brown) with a small part of the column filed down, looks very good in the Sprite and the Rapier.

Next, the petrol cap. When this is cut off the fuel tank cover, it fits on the Sprite best, or possibly the Rapier. Don't put it on the Dauphine, as this has an internal fuel filler cap under the rear end with the engine.

Finally, we come to the hub-caps. These look very good if the normal ones are to be left off. Just glue them on to the retaining nuts on the wheels and they look really good. This is made better if the wheel is painted silver with black dots to resemble holes.

A conversion on the vintage Bentley kit itself (which I consider to be your best older car—how about a 1926 or 7 3½ litre Le Mans model?) is to cut away the tarpaulin cover from the back of the seats, and then to cut the 'lumpy' piece off at the end. Interior detail is then added (such as a back seat, floor, foot pedals, fire extinguisher, etc). The bonnet is then cut out and the front piece of the bonnet (the strengthening bit) is then removed and stuck at the back of the radiator shell. An engine is then made

and fitted. Finally, side lamps from the Morris Cowley are fitted to the tops of the front wings and the horns are moved up on to the car between the headlamps. An extra lamp can be fitted if desired on the front dumb irons. And don't forget the two flyscreens!

J. ROBERTS,
Burnham-on-Sea, Somerset.

Merchant modelling

I have modelled the Airfix *Warspite* and *Bismarck* kits, and am delighted at the way the parts fit together—with a little care one can make a superb model. The only trouble with these Navy kits is the fact that there is not a great deal of painting or colouring to be done—apart, maybe, from the underwater part of the hull.

Is it not possible to model merchant vessels, with so much more variety, shape, and colour? Even the small 1,500-ton modern coasters have some beautiful lines, and at a scale similar to that of *Bismarck* some fine detail could result. With passenger cargo liners (Blue Funnel—with their outstanding design—Blue Star, etc) the possibilities of a fine merchant ship collection would result.

Is it because plans are not easy to come to hand—or is the initial planning or tooling too involved? I think, personally, that a merchant ship collection would bring many more interested modellers to the bench.

R. BRADSHAW, Manchester, 15.

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Balancing problem

Firstly, may I congratulate Airfix on the excellence of their English Electric Lightning F1A kit, which is surely one of their best kits to date.

The only fault to be found was in the balancing of the model on its undercarriage, and I hope the following method I have used may prove useful to other modellers confronted by this problem.

Following the instructions, I found that the suggested packing of the nose cone with Plasticine proved inadequate, and I was faced with the problem of adding extra weight to the nose, somehow, of an almost completed model.

I was able to solve this problem by removing the nose, and nose probe, and adding sufficient additional Plasticine through a hole cut in the front of the fuselage. By keeping the hole of a smaller diameter than the nose cone, I was able to hide all traces of the 'operation' when the nose was replaced and the model now stands firmly, looking every bit as impressive as the original.

R. H. BISHOP, Weymouth, Dorset.

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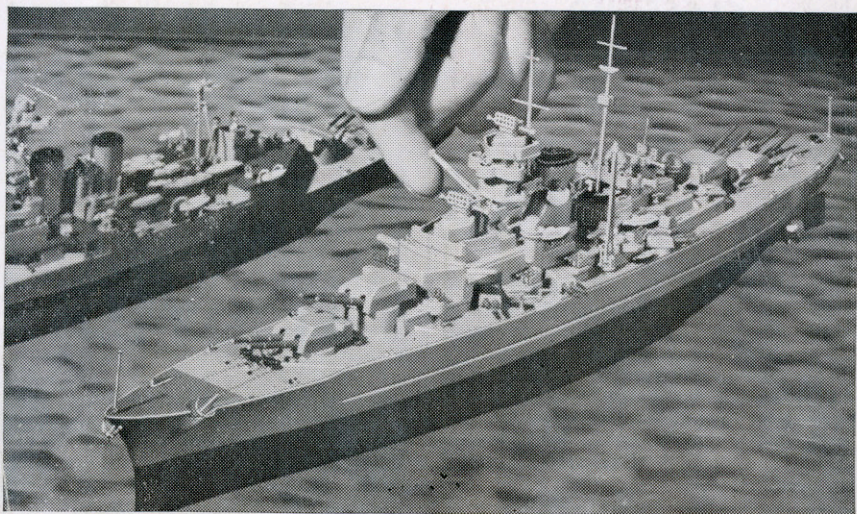
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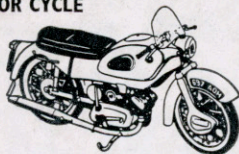
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